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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,293	12/10/2001	Garrett Storm Dunker		8488

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SEVENTH DAY SKYSTORM
PMB 546
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PHOENIX, AZ 85044

EXAMINER

MENGISTU, AMARE

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 11/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

dlf

Office Action Summary

Application No.

09/683,293

Applicant(s)

DUNKER, GARRETT STORM

Examiner

Amare Mengistu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5 is/are rejected.
- 7) ☒ Claim(s) 4, 6 and 7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show **“roll angular sensor 125”** as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character **“235”** has been used to designate both **displacement sensors and electronic operation unit**. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the **“an electronic input processor coupled to said sensing apparatus and graphical display”** must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the specification does not have support for the recitation of the claim **“an electronic input processor coupled to said sensing apparatus and graphical display”**.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Bacon et al** (5,963,197) in view of **Suzuki** (6,130,664)

As to claim 1, **Bacon et al** (hereinafter **Bacon**) discloses a handheld input device for controlling cursor (fig.1) comprising: an outer housing a cubical curved top half (fig.1 (102)); a plurality of input buttons (fig.3 (110,112)); a sensing apparatus with means (fig.4 (148)) of recognizing pitch and roll angular displacement relative to the base of vertical axis (see, col.2, lines 38-44), graphical display that effect pitch rotational input into vertical movement of said cursor on said graphic display and effects roll rotational

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input into horizontal movement of said cursor on said graphical display (col.2, lines 17-23,42-48) and the input processor to be coupled to the sensing apparatus (see, col.5, lines 59-67; fig.4 (158)).

Bacon also teaches that the bottom half of the input device is flat, but has failed to teach that the outer housing is cubical curved bottom half and an electronic input processor coupled to said sensing apparatus. The patent of **Suzuki** is cited to teach that it is well known for an input device to have a cubical curved bottom half (see, fig.2B (2b)).

Therefore it would have been obvious to one skill in the art at the time of the invention was made to have been motivated to incorporate the curved bottom and a processor connected to a sensor of the input device as taught by **Suzuki** into the device of **Bacon**, because this will provide an operation feeling can be adjusted to the most suitable feeling by adjusting the curvature of the case bottom or by adjusting the position and the size of the protuberance.

As to claim 2, **Bacon** discloses a navigation scroll wheel (figs. 1 and 2 (108,106)).

7. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bacon et al** in view of **Suzuki** as applied to claim1 above, and further in view of **Kato** (5,602,569).

As to claim 3, **Bacon** discloses a sensing apparatus comprising: two rotary encoders (fig.4 (124), col.6, lines 6-11); each fixed to a shaft (fig.4 (122)) and arranged orthogonal to each other; where one of said rotary encoders is free to rotate about the X

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axis and the second of said rotary encoder is free to rotate about the Y axis ((col.6, lines 6, lines 8-11); an LED and a corresponding photo detector for each of said rotary encoders units (fig.4, (146);(148); col.5, lines 35-54; col.6, lines 6-11); where said LED and said photo detector are positioned such that the rotary encoder passes through when rotated (col.5, lines 35-54).

Bacon did not explicitly teach that the rotary encoder maintains a gravitational vector orientation through a pendulum action. However; the patent of **Kato** clearly teaches that it is well known for an encoder to maintain its gravitation vector orientation through a pendulum action (see, col.10, lines 11-41).

Therefore, it would have been obvious to one skill in the art at the time of the invention was made to have used the gravitational vector orientation method of **Kato** into the device of **Bacon** since this can allow to follow to the change of the lean of the operating portion with high responsibility, and accordingly, the lean of the operating portion can be detected with high accuracy.

As to claim 5, Kato also teaches that a user assigned basis vertical axis, form which angular displacement measurements are taken (see, fig.14, col.13, lines 7-31).

Allowable Subject Matter

8. Claims 4,6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: the prior arts (Bacon, Suzuki and Kato) has failed to teach " a spherically

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shaped pendulum; where said optically reflective micro texture surface is the outer surface of said spherically shaped pendulum; where said spherically shaped pendulum can be a portion of or an entirety of a sphere; a plurality of gimbals with rotational freedom in a minimum of 2 directions and coupled to said spherically shaped pendulum; where said rotational directions are pitch and roll; where said rotational directions are pitch ,roll and yaw"; " a symmetry between the top half of the device housing and the bottom half; where said top half is made ergonomic to a right handed user and said bottom half made ergonomic to a left handed user; a switch indicative of a change between a left handed user and a tight handed user; where said switch is an external toggle switch; where said switch is an internal gravity dependent switch" and including all the limitations.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amare Mengistu whose telephone number is (703) 305-4880. The examiner can normally be reached on M-F, T-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (703) 305-4938. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

Amare Mengistu
Primary Examiner
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A.Mengistu

Oct.23, 2003


Amare Mengistu
Primary Examiner